

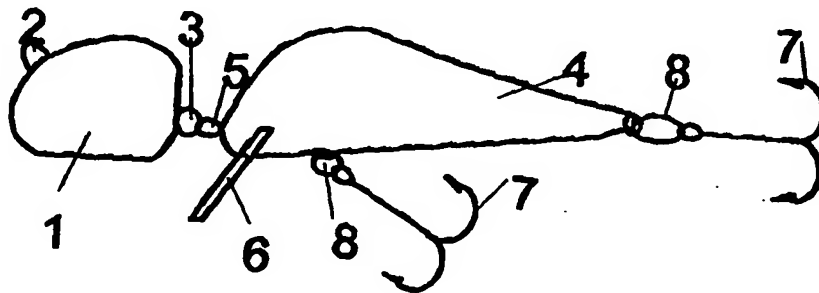


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(21) International Application Number: PCT/FI98/01005 (22) International Filing Date: 21 December 1998 (21.12.98) (30) Priority Data: 974624 23 December 1997 (23.12.97) FI (71)(72) Applicant and Inventor: BRANDT, Mikael [FI/FI]; Tarhakatu 3 as. 1, FIN-10900 Hanko (FI). (74) Agent: KELO HEINONEN OY; P.O. Box 671, FIN-00101 Helsinki (FI).		(81) Designated States: AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>In English translation (filed in Finnish).</i>

(54) Title: TWO-PIECE WOBBLER**(57) Abstract**

The invention relates to a two-piece wobbler which can be cast even against the wind and which, as the trolling ceases, continues its wiggling swimming motion forward and slanting downwards and thus ensures a vaster coverage of depth area with every cast. These characteristics are achieved with a special construction, in which the dive plane (6) has been placed, instead of the lead head (1) to the head end of the rear end (4) of a two-piece wobbler, to extend forward and downwards. Likewise the lead head (1) of the wobbler has been made of considerably denser material and thanks to it the casting characteristics of the wobbler are much improved.



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TWO-PIECE WOBBLER

Use of wobblers in casting and trolling has been known for decades already, and the fishing characteristics of wobblers are constantly being improved in many ways. The fishing characteristics of wobblers are based on their ability to imitate a swimming fish and this characteristic especially has been under improvement process in many ways during the years.

10 The traditional wobbler is made of relatively well-floating material and it remains under water while trolling and reeling because of the dive plane, a flat plate extending forward and downwards from the lead head of the wobbler. In some solutions even the inclination of the dive plane has been adjustable. The
15 traditional wobbler is rigid and its swimming cannot, not even at its best, perfectly imitate the motions of a real fish. Therefore two-piece wobblers with a hinge in the middle of the body, thanks to which the body of the wobbler usually bends both to the sides and up and down, have been made.

20

The second problem connected with traditional wobblers is that wobblers, due to their construction and operating principle, have quite low density and especially when cast against the wind their mass is not sufficient to beat the air resistance.

25 Casting wobblers against the wind is thus especially toilsome and in some conditions impossible. This is often the problem with the nowadays extremely popular ultralight equipment. For example, an absolute requirement for the use of an ultralight wobbler weighing 2 - 3 grams tied on a line of 0,10 mm, is fol-
30 lowing wind or calm weather conditions.

The third problem traditionally connected with wobblers is that the wiggling swimming action is achieved only when the wobbler is constantly trolled and as the trolling ceases, the wobbler either starts to surface directly or it slowly sinks, depending
5 on the floating characteristics, but in any case the wiggling motion forward stops. In many situations the change in the swimming direction and swimming speed is the key impulse for the fish to attack, and having these characteristics in a wobbler makes it much more fishable.

10

In order to solve these problems, a new type of wobbler is presented here. It differs from previously known wobblers by its characteristics so that it can be cast against the wind even at ultralight lengths, and that it continues its wiggling swim
15 forward and slanting downwards, and thus makes it possible to cover a greater depth area on each cast. Furthermore, it has excellent swimming characteristics and its ability to imitate a fish with its motions is good.

20 These characteristics are achieved by a special construction in which the dive plane is placed, instead of the lead head of a two-piece wobbler, to the head end of the rear end to extend forward and downwards. Accordingly, the lead head of the wobbler has been made of material considerably denser than usual
25 and thanks to it the casting characteristics of the wobbler are considerably improved. Likewise, when trolling of the line ceases, the head end starts to pull the wobbler downwards and the rear end of the wobbler continues its swimming so that the wobbler swims forward, slanting downwards.

30

If the rear end of the wobbler was made of a material denser than usual, it would have a negative effect on the swimming

characteristics and thus on the fishing characteristics. What would be gained in casting characteristics would be lost in fishability. Therefore the solution according to the invention is substantially more advantageous than known solutions.

5

US-patent 4654995 presents a two-piece wobbler, in which the head end of the lead head has been shaped an inclined dive plane reaching outside the body of the head end of the wobbler and which has a dive plane in the rear end and whose lead head and rear end have been connected with hinge links under the gravity line. In this solution, however, the lead head and the rear end are made of the same material and the head end must be shaped inclined or equipped with dive planes in order to preserve at least adequate swimming characteristics. In addition, in this solution the unsatisfactory casting characteristics are still present and to preserve its swimming motion, it must be controlled constantly, whereas in the solution according to the invention the head end can, if desired, be almost of any type and its casting and swimming characteristics are better than in the known solutions.

20

One extra benefit in the construction according to the invention is that if desired, fins or other projections can be added without deteriorating its swimming characteristics.

25

Characteristic of the invention is what is presented in the novelty part of the claims.

The invention is described in the following in detail by referring to the attached drawings.

30

Fig. 1 presents one of the embodiments of the lure according to the invention seen from the side.

Fig. 2 presents one of the embodiments of the lure according to the invention seen from above.

Fig. 3 presents another embodiment of the lure according to the invention seen from the side.

Fig. 4 presents another embodiment of the lure according to the invention seen from above.

Fig. 1 and 2 present one of the embodiments of the invention and in them is presented the lead end 1 of the wobbler, which is made of denser material than usually used in wobblers and preferably it is of metal. The lead head 1 has a fastening link 2 in which the line is tied on. The fastening link 2 is preferably above the longitudinal axis drawn via the centre of gravity of the lead head so that the lure remains substantially backside up when trolling and reeling. The back end of the lead end 1 has a hinge link 3, in which the rear end 4 of the wobbler is attached to with another hinge link 5. The one from the hinge links 3, 5 which is horizontal can preferably be shaped wide so that the "flexibility" of the wobbler is increased and thus swimming becomes more unstable and wavering which increases fishability. Thanks to the hinge links 3, 5 the wobbler bends during swimming, not only sideways but also in other directions. A dive plane 6 has been shaped on the head end of the rear end 4 preferably under the hinge link 5 which preferably extends forward and downwards and extends preferably under the lead head 1. It is possible to attach one or several hooks 7 which can have a single branch or several, to the rear end 4.

In order to ensure mobility of the hooks they are preferably attached to the rear end with extra rings 8.

Fig. 3 and 4 present an embodiment of the two-piece wobbler according to the invention in which finlike constructions 9, which can be of rigid or flexible material and can be attached to the lead head directly or with a ring in order to ensure mobility, have been added to the lead head 1.

10 The wobbler according to the invention can be coloured to resemble a fish, or other decoy colours can be used. Likewise it is possible, if desired, to paint eyes or other luring constructions on the lead head.

15 Different embodiments of the invention have been presented in this explanation and minor changes can be done without leaving the scope of the invention.

CLAIMS

1. A two-piece wobbler equipped with a dive plane (6) to be used as a trolling or casting lure, which has in the lead head (1) a fastening link (2) to tie the line on and on the rear end (4) of which one or several hooks (7) with a single branch or several have been attached to, **characterized** in that the dive plane (6) has been attached to the rear end (4) and that the lead head (1) is of denser material than the rear end (4) and that the joint (3, 5) between the lead head and the rear end makes it possible for these parts to move on more than one level in relation to each other.
2. A wobbler according to claim 1, **characterized** in that the lead head (1) is made of metal.
3. A wobbler according to claim 1 or 2, **characterized** in that the fastening link (2) is above the longitudinal axis drawn via the centre of gravity of the lead head.
4. A wobbler according to one of the claims 1 - 3, **characterized** in that there is a hinge link (3) in the back end of the lead head (1), in which the rear end (4) of the wobbler is attached to with another hinge link (5) and that the one from the hinge links (3, 5), which is horizontal, has been shaped wider than its depth.
5. A wobbler according to one of the claims 1 - 4, **characterized** in that the dive plane (6) shaped in the lead head of the rear end (4) under the hinge link (5) reaches under the lead head (1).

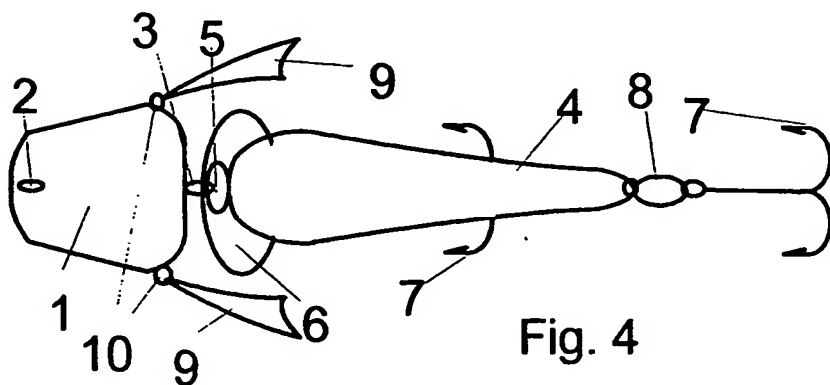
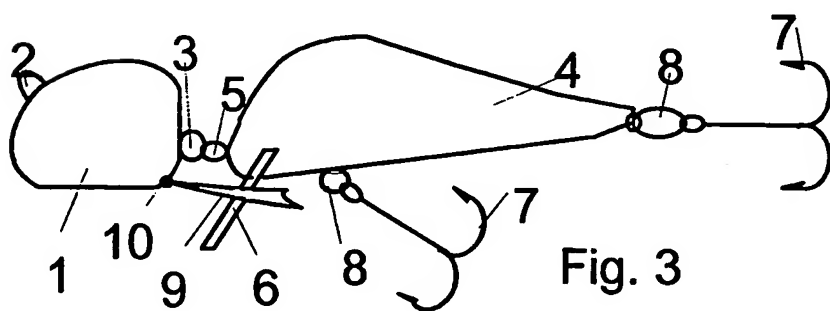
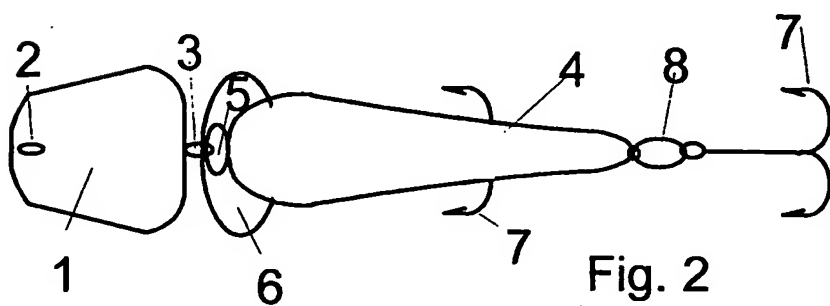
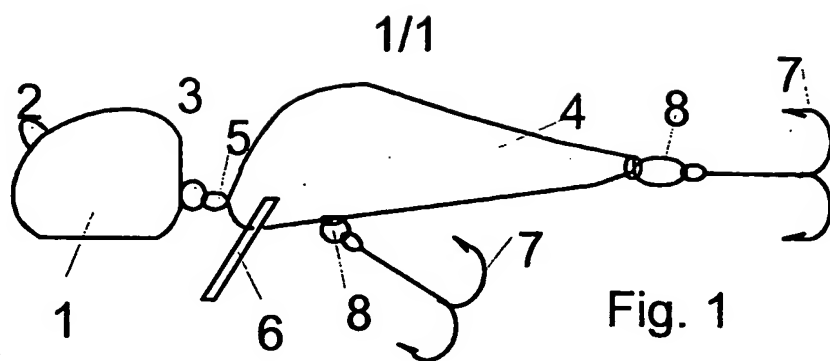
6. A wobbler according to one of the claims 1 - 5, characterized in that finlike constructions (9) made of rigid or flexible material have been added to the lead head (1), which have been attached to the lead head directly or with a ring.

5

7. A wobbler according to one of the claims 1 - 6, characterized in that the hooks have been attached to the rear end (4) with extra rings (8).

10 8. A wobbler according to one of the claims 1 - 7, characterized in that the lead head (1) has the shape of a fish head.

9. A wobbler according to one of the claims 1 - 8, characterized in that eyes have been painted on the lead head (1).



INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 98/01005

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: A01K 85/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: A01K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 842172 A (M. LOUIS BOUYON), 7 June 1939 (07.06.39), column 1, line 19 - line 20; column 2, line 39 - line 43, figure 2 --	1-9
A	FI 924437 A (MÄKITALO, TOMMI KALEVI), 3 April 1994 (03.04.94) -- -----	1-9

☐ Further documents are listed in the continuation of Box C.
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Information on patent family members

02/03/99

International application No.

PCT/FI 98/01005

Patent document cited in search report			Publication date	Patent family member(s)	Publication date
FR	842172	A	07/06/39	NONE	

FI	924437	A	03/04/94	NONE	

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